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COMMONWEALTH OF VIRGINIA

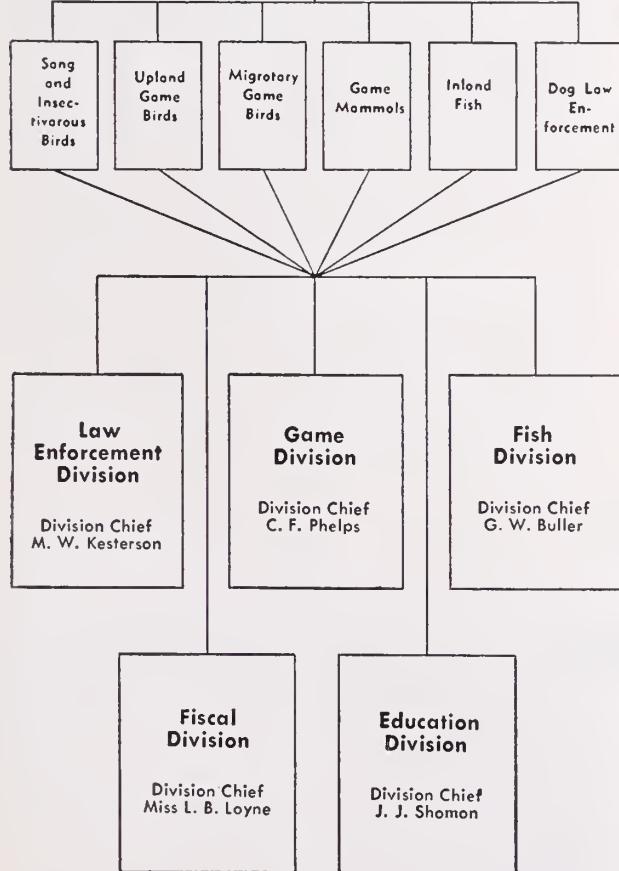


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J. J. SHOMON, *Editor*

R. T. SPEERS, *Associate Editor*

F. S. McDANIEL, *Circulation*

L. G. KESTELOO, *Photography*

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Cover Photo

An infrequent northern visitor poses for the camera. The snowy owl is a native of the Arctic wastes, but food shortages sometimes drive him as far south as the Old Dominion.

Photo by Cruickshank from National Audubon Society

VIRGINIA WILDLIFE gratefully receives for consideration all news items, articles, photographs, sketches and other materials which deal with the use, management and study of Virginia's interrelated, renewable natural resources:

WILDLIFE

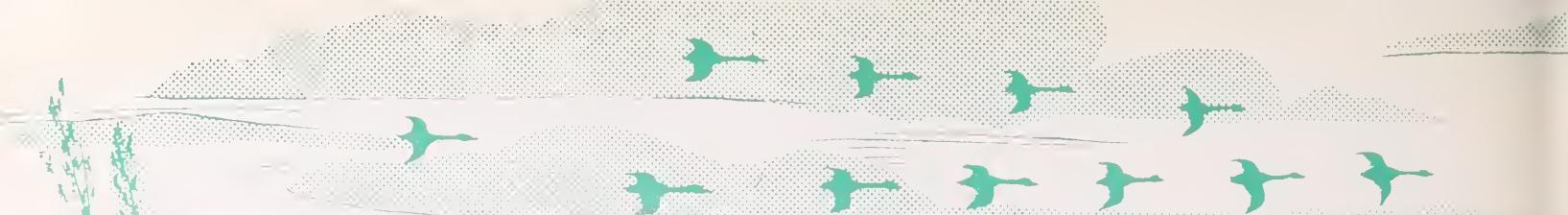
SOILS — CONSERVE — WATER

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FORESTS

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Conservation Education From A Wildlifer's Viewpoint

By J. J. SHOMON

*Chief, Education Division
Virginia Commission of Game and Inland Fisheries*

THE SUBJECT OF education in conservation — particularly emphasizing the wildlifer's point of view — poses some basic and far-reaching considerations. It is a topic that I approach with no little degree of humility, for I realize full well the scope of the field, the formidable problems, the range of relationships, and its tie-in with our very pattern of living.

I'm afraid I cannot prescribe a blueprint for conservation education, for I have none. Furthermore, I have serious doubts that one exists anywhere. If it did, it probably would have decided limitations, as our problems vary as we cross state borders and international boundaries. Yet there are some considerations which are basic in any discussion of conservation education. It is these more basic fundamentals which I propose to discuss.

At the outset, I think it only proper that I review the need for conservation education today. I realize that this should hardly be necessary as far better scribes than I have done this—sounded their ominous warning in recent years with almost frightening candor. Yet a second reminder might not be out of order.

The continued growth of human populations the world over has forced us to give

increased attention to the conservation of the earth's natural resources. Man has repopulated the earth four times within the past 300 years, doubled his numbers within the last 100. Human beings have spread into every living corner of the earth except the frigid polar regions. Now there are no new lands to conquer, unless it be outer planetary space. There is no escape from man's difficulty from without. Therefore we must find the solution to our troubles here.

Our earth has suffered irreparable ravages. Some scars are permanent. History is replete with examples of flourishing civilizations that have gone into oblivion, their once pretentious cities smothered beneath wastes of sand, their people scattered to new regions. Everywhere stand silent, glaring testimonials of man's stupidity, recklessness.

Recent upheavals in man's environment bear out the weaknesses of his past stewardship. In a very broad sense, wars, atomic explosions, floods, plant and animal shortages, dust storms, water crises, and political upheavals are but manifestations of a terribly disturbed environment. And the sad truth of it all is that unless man recognizes his mistakes and makes amends, these dis-

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turbances will unquestionably increase in violence, and may even spell death to our whole planet.

Every one of us is aware that man as a living resource is completely dependent upon all other renewable resources. And we know that all of these resources are interrelated and interdependent. We know further that our natural resources are limited and that we are running short on the supply. Yet the general public does not know this; our youth does not know it; few industries care to recognize it; relatively few men that influence our political life have been willing to face it. The present delicate situation in the world testifies that our world governments are not aware of it.

The big question we might ask ourselves then is, what are we as conservationists prepared to do about it? Can we do anything definite? Well, I hope we can. And maybe that hope lies somewhere in the field of education. Possibly it is our only hope.

It seems to me that as custodians of wildlife we are in a key position to do some real good, and we need not travel far to find a place to start. If an enlightened citizenry with respect to the use of our life's sustaining resources is needed, then let us light the way. This calls for leadership. Where better can this leadership for wise use be found than in conservation departments or game and fish commissions of the different states and provinces?

This does not mean that we alone should feel responsible for conservation; far from it. We must not overlook the fact that every citizen, every boy and girl in school, every voter, every social and every non-governmental agency is also responsible for

conservation. Conservation, besides being an individual responsibility, should be a civic responsibility.

Still, we must agree that it is the governmental agencies that are in a better position to know the resources on hand, and can supply the necessary leadership to point the way, than is the average citizen. A state wildlife agency with its numerous opportunities for surveys and research can better determine the deer population than can an individual hunter. However, mutual respect and confidence between the governmental agency and the citizen can be maintained only by the most careful presentation of facts, impartial in every respect, candid, undramatized. The facts must be sound. They must be in such simple terms that they can be conveyed to the intelligent, non-scientist, and lay public. Then, and only then, will the governmental agency gain the confidence and the support of the man of the streets. Without this confidence we can get nowhere.

Being in a key spot to point the way for conservation education then, what should be the objectives of the wildlife educator?

The greatest single contribution that the wildlifer can make to spreading the doctrine of conservation is not to overlook the ultimate common goal — *better citizenship through the achievement of a good life based upon the wise use of natural resources*. This means getting across basic concepts. And what are these concepts? I can list four major ones: (1) the fallacy of inexhaustibility of natural resources, (2) man's relationship to his environment, (3) the fact that living resources are interrelated and interdependent, and (4) the universal



responsibility of the citizen to *foster while using* natural wealth for the common good, for the greatest number, and for the longest time.

What about immediate objectives? It seems to me that the wildlife educator should first create attitudes, and give experience and knowledge which will result in action on the part of citizens to conserve resources. To put it simply, we need to get over the idea that it is smart to waste things. Furthermore, we must try to shrink away from constant thoughts of exploitation and get back on the producing end. Our American way of everybody harvesting and only a few putting back must be changed. The larder is no longer so full—we've been depleting it mighty fast.

In speaking of creating proper attitudes, or a proper consciousness, I mean first getting the correct attitude ourselves before teaching others, then creating wholesome attitudes on the part of our great public generally, and more specifically on the part of such large segments of our society as the youth, industry, the press, and our legislators. Let us review the need here briefly.

The using public is where lies our big opportunity. It is here that we find a fertile field for conservation education. Our hunters and fishermen for instance, are found here. So many citizens hunt and fish today—roughly 25 million persons or one out of every six—that we cannot treat them separately as a distinct class of people; they are the using public. And in starting our educational work in this direction we should never lose sight of two things: (1) keeping this public informed as to what is going on, and (2) getting it acquainted with the complexities of wildlife management. The principles of good land use and such things as no waste, carrying capacity, game cycles, breeding potential, and "properties" of game populations

should be forcefully brought before this audience and in terms that are understood and appreciated.

The average outdoorsman must be brought to realize that the management of wildlife is no clear simple matter, that we are treating a living resource that is subject to a wide variety of influences, that only the most careful kind of management based on sound research findings can ever hope to provide the answers to our problem. The so-called "one-gallus" hunter and fisherman must be brought to a point where he will voluntarily accept the findings and recommendations of his wildlife commission as to the best management of the wildlife source. This must be done, otherwise what excuse do we have for the existence of wildlife training schools, research units, laboratories, experiment stations, and scores of trained men who have given themselves years of professional training in the wildlife field?

This type of acceptance of the wildlife agency by the layman will not come by itself. There first must be efficient wildlife administration, continued good research, intelligent dissemination of accurate information, long-range educational work, and a coordinated good public relations program. Some safe methods and techniques by which this can be accomplished will be touched on later in this paper. But, for now, let us confine our discussion to more fundamentals.

In speaking of youth, it is here that we find our trump card in the deck of natural resource use education. No element of our population will reap greater rewards from a constructive conservation program than our growing youngsters of school age. As members of the younger generation, they are in the very best possible position to benefit from a broad, long-range program than are their elders. Lacking perspective, they should be given

Wildlifers should always keep in mind the goals of conservation. This means getting across basic concepts concerning the interrelationship of water, soil, wildlife, plant life and human resources. Nature's balance top should be made to spin smoothly.

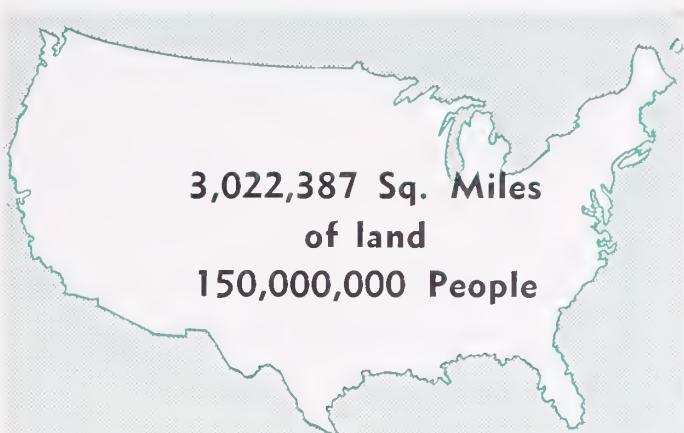
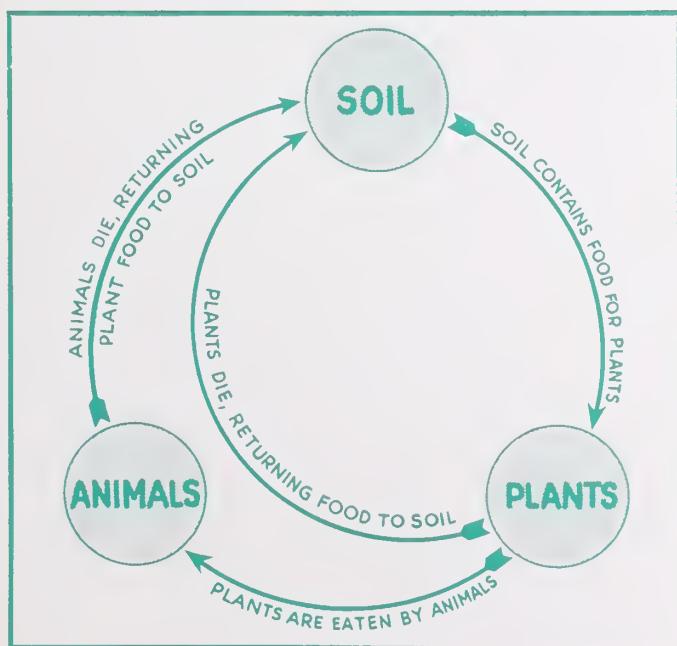


the opportunity to learn conservation concepts and broaden conservation habits. Our youth is our future. Any program of education that is not fundamentally based on working with our boys and girls is treading on weak ground. Every evidence we have points to our schools and the molding of opinions of the rising generation of future citizens as the safest road to travel in our resource use planning.

In reference to industry's stake in conservation, it might be said that this branch of our society has repeatedly shown an interest in conservation, but to date has made little contribution to it. True, a small number of industrial firms, such as some lumber and paper companies or farm equipment companies, have carried on conservation programs for their own sakes, but industry by and large has not yet sufficiently recognized its sustained dependence upon renewable resources for existence. A method must be found by which industry can play an increasingly greater role in the whole picture of conservation. We should endeavor to bring them into our program at every opportunity.

When it comes to matters of legislation, it is evident that much of our welfare is dependent on laws we may pass, or fail to pass, which have an influence on the resources required for our future welfare. Public alertness to proposed legislation is essential to successful development of conservation work and education. Unless we keep our legislators fully informed on conservation matters, many years of diligent and fruitful effort can be wiped out by the passage of unwise laws. Educating our legislators, where need be, is a big, delicate task, but every dollar expended in this direction will be more than compensated for in the end.

The cycle of nature has no beginning and no end. When this circuit breaks, serious repercussions follow.



Our resources in land and people. Conservation will mean a more abundant life; further exploitation—disaster.

The conservation press needs to be brought more into the picture. There is much evidence of the interest of the nation's press in conservation, but this interest has barely been awakened. Better press relations are needed. The outdoor press can render resource use education either a great service, or a disservice, depending on what cooperation we choose to give it. To get cooperation from the outdoor press we must be prepared to give cooperation. Biased, one-sided efforts will not produce desired results. Wishful hope will hardly bring an apathetic press on the side of conservation. We must somehow show the press how it can benefit by selling conservation. Thought-provoking articles with plenty of reader interest, dramatic presentation of subject matter, good pictures—all will improve press relations.

As one great outdoor journalist and conservationist recently remarked: "Present techniques, whose surface is barely scratched for reaching the general public, must understand the pattern of press agency. They must be alert to the nuances of timing, realistic to the art of selling and telling a story.

"If you want to precipitate the public's interest, seek to make its stomach juices flow, involve its pocket book, invoke its family or home, or affect its pleasure and hobbies, give it something to say, make it say, 'Well, what do you know about that! . . .'"

The task of education is the responsibility of every citizen. It is especially the responsibility of those in positions of leadership in existing educational agencies: civic, youth, recreational organizations and churches; press, radio, and film industries; banks and trust companies; industrial corporations and their trade associations. The job is really an all-inclusive one.

Thus far we have dwelt only on the urgency of conservation education, our aims and objectives,

(Continued on page 21)

ARCHERY HUNTING IN VIRGINIA

By ELMER V. RICHARDS
District Game Technician

IN VIRGINIA, BOW HUNTING is in its infancy. This form of hunting, however, has gained much in popularity in recent years. In 1949, at the request of Virginia's archery clubs, the Virginia Game Commission and the George Washington National Forest agreed to set aside an area of 3,500 acres within the North River Refuge as an archery area. Within this area deer and bear may be hunted with bow and arrow only. The season and regulations in the archery area are the same as those pertaining to the general deer season. All gun hunting is prohibited within the refuge.

The 3,500 acres now set up as an archery area in Virginia constitutes the watershed for the city of Staunton. To some extent this watershed influenced the establishment of a refuge there. It is ideal for an archery area. It can be used by a relatively small group of people without conflicting with the primary value of the area. It affords an opportunity for additional use of public land without withdrawing the land from other use.

Anyone may hunt deer or bear within the designated archery area. The only restriction is the type of weapon. Limiting the killing of big-game to bow hunting in the North River Refuge can be compared to designating an area where squirrels could be hunted with only .22 caliber rifles.

Some thought that archery hunting within the North River Refuge would wipe out the deer in the refuge or result in many crippled or wounded animals. This was not the case last hunting season. In 1949, approximately sixty Virginia bow hunters hunted over the 3,500 acre archery area. Practically all bowmen hunted for the three day season, which ran concurrently with the regular deer season. Bowmen followed the same deer regulations that applied to the gun hunters. All archers expressed the opinion that the first bow hunt was a success, even though only one buck, (an illegal spike-horn), was killed by a Bowman. Many archers reported having shots or seeing deer. One archer reported he stalked a bear for several hours only to have the bruin cross the boundary of the archery

area. At about this time a rifle hunter hunting nearby finished the bear off.

Bow hunting is not new to other states. At present, 13 other states provide hunting areas for archers. These states are Georgia, North Carolina, West Virginia, Pennsylvania, New Hampshire, Michigan, Nevada, Wisconsin, Utah, Wyoming, Oregon, Washington, and Idaho. In 1946, bow hunting was legal in every state in the Union except North Dakota. Some states offer bow seasons that begin 4 to 6 weeks prior to the gun hunting season. Other states offer special archery seasons or maintain separate archery areas. Eleven states allow bowmen to take either sex of deer.

Wisconsin and Michigan have the longest bow seasons and allow bow hunting on a larger scale than any other state in the Union. All counties of Michigan can be hunted by bow hunters prior to the regular deer season. Bucks only are taken in some counties, while in others either sex deer may be killed. Wisconsin began archery hunting in 1934 when two counties were thrown open to deer hunting. In 1949, the entire state of Wisconsin was open to bowmen and 12,000 archers reported a kill of 551 deer.

The percentage of bow hunters successful in killing deer will always be low. This has been proven to be the case. Look at the other states that allow archery hunting. Wisconsin archers in 1949 were successful to the degree that one bow hunter out of twenty-five killed a deer. Michigan found that approximately one out of every 30 archers hunting deer in that state will be successful. The percentage of successful Michigan bowmen varied from 1.2 to 4.2 per cent over a nine year period of hunting. On the other hand about 30 per cent of all Michigan deer hunters armed with rifle or shotgun were successful in getting their deer over a similar period of time. This comparison shows that archery hunting is not a suitable method of harvesting deer surpluses on an area. It is not a method of herd control. The main appeal of archery hunting is in the type of hunting it affords and not in

the amount of game harvested. Some states have made studies that reveal as high as 53 per cent of archery hunters now buying licenses were at one time dyed-in-the-wool rifle hunters. This conversion of gun hunters to bow hunters proves that the appeal of the bow is strong.

Archery hunting is different from gun hunting in many ways. If you enjoy the chase rather than the kill—then you probably will enjoy bow and arrow hunting. Hunting with a bow requires stalking. Perhaps the stalking part of bow hunting is what gives this form of obtaining game its great appeal. To hunt game in a manner similar to the way of the Indian, where a hunter has to pit his skill as a marksman and use all his knowledge of woodsmanship and cunning in overcoming the keen senses of wild game offers something to the bow hunter that perhaps is somewhat lacking in hunting with a gun. The archer tends to dress in clothing that blends with the forest rather than be conspicuous. Bow hunters are never too numerous and a modern Robin Hood may stalk a deer all day without ever seeing another hunter. Contrast these conditions

Archery hunting requires a close and careful stalk, plus a steady eye and hand.

Photo by Crawford



with the "hunter behind every tree" situation nowadays.

Now let us consider the equipment of a modern bow hunter. Archers use many types of bows. Some are long and slender and other bows are of the "turkish" type—with fancy crooks on the ends. The best wooden bows are made from osage orange and yew woods. Lemonwood is also in great use by bowmen since it makes very good bows and is a bit cheaper in price. The use of plastics has recently given rise to the wood-plastic laminated bows. Some archers believe that the light weight aluminum bow is the only equipment to carry. As for the strength of a bow, any 50 to 60 pound bow is adequate for deer hunting. What is meant by a 50 pound bow is the number of pounds of force required to pull the bow the full length of an arrow. Bows having lighter as well as much stronger pulls are in use today. Women archers seem to favor the 40 to 45 pound bows. All the bows used by modern archers nowadays are far superior to those used by the American Indian.

Arrows are also made out of various woods. Port Orford cedar is considered the best arrow wood, but almost any straight grained wood can make good arrows. Arrows weigh about 1-1/8 ounces and are usually tipped with single or double-bladed broadheads. These broadheads made of steel are sharpened to a razor-sharp edge in preparation for the hunting season.

Armed with a bow and arrow, the bow hunter realizes that his chances to kill a deer or bear are obviously smaller than if armed with a gun. To kill a deer the Bowman must get close to the animal. He will hold off a shot until he knows he has a chance for a killing blow. That's where the stalking part of bow hunting comes in. Most deer killed by an arrow are killed within 25 to 30 yards. Once hit by an arrow most deer are found dead within 200 yards from where first hit. Very rarely does an archer hit big-game effectively at 50 yards or more since even a small twig can deflect the flight of an arrow.

If a bow hunter is fortunate to get a shot at a deer he will aim at the vital killing area of a deer—the chest. To make a clean killing shot at 30 yards while aiming at an area of 12 by 15 inches requires a lot of skill. Ordinarily one arrow must do the trick since the deer is off at the twang of the bow string. When an arrow hits a deer the arrow usually passes completely through the body. Experts say that an arrow kills by causing hemorrhage, whereas a bullet kills by terrific shocking power.

(Continued on page 12)

CAMP MONOCAN,

Boy Scouts' Contribution to Wildlife Conservation

By ROBERT H. GILES, JR.

TO THE YOUTH of America, wildlife has a strange attraction. It is one of adventure, romance and mystery. A magnificent buck as it slips through the forest, or a fat groundhog as it waddles from its burrow, steals the mind of a boy and carries him back to the days of his country's founding. They all leave deep impressions which build a better man—a better citizen. Thus Camp Monocan has devoted its 400 acres to instill in the boy scout that love and understanding of wildlife which comes from observation and study.

The Piedmont Area Council, having secured this property three years ago, has made a steady development until today it is a self-supporting camp capable of taking care of over 100 scouts a week. A spacious mess hall overlooks a beautiful 12-acre lake which has been stocked with smallmouth bass

An old oil drum, cut at the bottom and roofed over, provided an ingenious wildlife feeder.



and bream by the Commission of Game and Inland Fisheries.

Located in Nelson County, Virginia, 18 miles from Waynesboro in the heart of the Rockfish Valley, Camp Monocan offers terrain suitable to almost every species of wildlife. With an elevation of 800 feet below the dam breast, the property climbs to 2386 feet at the top of Crawford's Knob, which overlooks the camp. This variation in elevation along with the lake shore and marsh offers an excellent opportunity for the extensive study of the flora as well as the fauna.

The camp offers training for young bird-lovers through the requirements for the bird study merit badge. On the 114 birds listed for the camp, the 40 required for the merit badge are easily identified. The lake offers a great attraction for waterfowl and shore birds. American egrets, great blue herons and the belted kingfishers were the most spectacular. Nesting on the lake were the green heron, the coot, and the kingfisher.

Many steps have been taken to develop the camp into a wildlife refuge. Over 15 natural shelters have been built by scouts for protection of winter residents. More than 700 bicolor lespedeza shrubs have been planted with very good results. Many patches of buckwheat, milo maize, and millet adorn the field borders and are in regular use. Over 20 pounds of sericea lespedeza have been planted in combination with the bicolor plants, as well as by itself. A border of sunflowers offers a pleasant delight to goldfinches and other seed eaters. A 50-pound perpetual feeder has been placed near the lake.

Some attempts have been made to stock ring-neck pheasants by interested scouts and scouters. Six were released last year and eight this year. All were raised as projects for conservation awards. The land has been posted and the cooperation of neighboring farmers assured. The caretaker, Mr. Hawes Coleman, and his wife live at the camp the year



A bicolor border planted for wildlife gets a careful workover by scouts Buddy Giles, Bill Lund and Bob Giles.

round to guard against violators and to care for the camp.

An event waited for by every scout at camp during the summer was the arrival of members of the Lynchburg Izaak Walton League, who gave instructions in angling. They gave every boy a chance to learn and to use both the fly and casting rods. By such an experience the boy was able to learn proper form and fishing tips from true sportsmen.

The Virginia Forest Service fire-fighting truck was a weekly visitor. By demonstrations for fire-fighting tools and equipment and by actual experience, the scouts were taught their use. A walk along the nature trail with the forester gave them a different picture of forestry. Estimating heights and board feet content of trees, learning of annual growth and of tree diseases, presented a picture of the technical side of forestry. Then at night, movies supplemented a most interesting and enjoyable day, impressing further the seriousness of forest fires and that it is everyone's job to help prevent them!

Two albino deer caused a great deal of excitement among a group of campers last fall. The report was doubted by many, but when one was seen again this summer, it erased all doubt. Located not too far from Big Levels Game Refuge, Camp



Dozens of signs were painted and erected by the scouts to mark the boundaries of their refuge area.
Bob Giles sorts the markers.

Monocan boasts a wide variety of game species. Along with the whitetail deer, a favorite of Virginia sportsmen, the ruffed grouse and wild turkey are found on Crawford's Knob. Two good-sized coveys of bobwhite quail take advantage of good cover along field borders. Nesting mourning doves utter their plaintive call at night. A thick beech forest shelters hordes of squirrels. Muskrats inhabit the lake. With their continued assistance, the farmers of Nelson County and surrounding counties will be able to reap the benefits of a game refuge; not only the material benefits, but those of inspiration and education.

There was a new award introduced at camp this summer — the Camp Monocan Conservation Award. Its requirements were: learn the American Conservation Pledge, and perform a project while at camp connected with soil, forest, water, or wildlife conservation. Over 40 boys completed the work for their ribbon.

Through the cooperation of Mr. H. F. Cote, Scout Executive of the Piedmont Area Council, Boy Scouts of America, and other interested scouts and friends, Camp Monocan has been made a wildlife refuge, thereby enabling the young men of scouting to learn good sportsmanship and to appreciate the many values of wildlife.



Get Ready NOW for Wildlife Plantings

"THE FUTURE BELONGS to those who prepare for it." This proverb is particularly applicable to the hunter of upland game who wants to be reasonably certain of finding game in his favorite coverts each fall. Since all wildlife, including upland game, must have food and cover the year round, sufficient food and cover must be present in order to hold the game within its home range so it will be "at home" when the hunter visits his old hunting grounds. The hunter, sportsman, or landowner who takes steps this winter to see that the necessities of life for his game are present throughout the year, is the man who will have a successful hunting season next fall.

What can the average hunter or landowner do about this NOW? First of all, it will be necessary to find out what is missing in the way of good wildlife environment, and to make plans during February or March as to what he can do to improve it. A visit to his fall hunting grounds will in all probability reveal that where food and cover were abundant last November, it is now hard to find. Food has just about disappeared and what cover there was is now beaten down by snow, ice, and rain until it is of little value as protection for game species. Once the sportsman decides what is lacking, it is fairly easy to find out what to do about it.

The field personnel of the Commission of Game and Inland Fisheries, the district game technician, and the county game warden are all in a position to help him secure material in the form of shrub lespezea plants and annual seeds for improving the area and to help him plan his work next spring. If he doesn't already know these men, now is a

good time for him to contact them. The Game Commission is prepared to distribute this spring a considerable quantity of shrub lespezea plants for use in field borders, and annual seed for use in establishing food patches. This material will be distributed through the county game warden and through the Soil Conservation Districts. In addition, any of the Commission or Soil Conservation District personnel will be happy to give advice on any phase of wildlife habitat improvement.

Shrub lespezea may be planted any time between now and May 15, and the sooner it is planted, the better, as spring is a busy time on the farm, and it is easy to put off planting wildlife food and cover plantings until it is too late. Anything that can be done this winter along this line will be that much less that has to be done this spring. Plowing and discing the ground for annual food patches should be done as soon as possible for the same reason. The more care given to these plantings, the more likely they are to be successful. Details on planting for wildlife may be obtained from the warden, game technician, or by writing to the Commission office in Richmond.

The important thing to remember is to do something concrete to improve conditions for wildlife, so that your game will be around when you go hunting next fall. Contact your warden or game technician right away! The supply of seed and plants is limited and if your order is late you may be disappointed. Get ready NOW for the spring planting season and you will have happy hunting next fall.

James E. Thornton

ARCHERY HUNTING

(Continued from page 9)

The killing power of a bow and arrow has been questioned by some. During the past few years American bowmen have successfully hunted Kodiak bear, grizzly bear, moose, cougar, and African lions. An experiment once revealed that a hunting arrow could be driven completely through a five quart pail of sand, whereas the bullet from a high-powered rifle only penetrated the sand to a depth of four inches.

In an effort to determine the crippling loss on Virginia's archery area during the last hunting season a thorough search of the area immediately following the hunting season was made. It failed to reveal any dead or crippled deer.

Archery hunting is basically good conservation. This modern form of hunting is considered good game conservation because of the following reasons.

1. Bow hunting allows hunters additional recreational use of a deer herd with the advantage of doing little to deplete the size of the herd.
2. Bow hunting allows a state that has a small population of big-game animals to spread the hunting pressure use of the herd over a longer season and thereby afford more hunting to more sportsmen.
3. Bow hunting is also a comparatively safe method of harvesting game in areas of high human populations where the use of firearms would prove dangerous.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Late Wildlife News . . . At A Glance

VIRGINIA HUNTERS PAG LONG-LIVED SPECIMENS: Two deer taken in Smyth County during the past hunting season bore ear tags indicating that they were part of the original releases which the Commission made in restocking the western areas of the state with the whitetails.

One of the deer carried a tag reading "Pisgah 1938," indicating that it had been brought originally from the Pisgah National Forest in North Carolina and was at least 12 years old. The restocking program that brought these deer into the mountains was the largest and most successful program of its kind in wildlife history. An original planting of 1,783 deer in the area has increased until the Commission estimates that 40,000 deer now roam the mountainous section of the state.

GAME COMMISSION HAS RIGHT TO DEVELOP HOG ISLAND AS A REFUGE: By ruling of Attorney General J. Lindsay Almond, the Act that prohibited the Commission of Game and Inland Fisheries from acquiring any marsh lands for purposes other than hunting has been declared void, and the Commission now has the power to proceed with the development of the newly acquired Hog Island property as a waterfowl refuge. Commission officials say that they expect the development of the new property to greatly increase the waterfowl on the James River and its tributaries.

FOURTEENTH OBSERVANCE NATIONAL WILDLIFE RESTORATION WEEK ANNOUNCED FOR MARCH 18-24: The fourteenth annual National Wildlife Week this year falls in the week having the first day of Spring. The observance of this week is sponsored by the National Wildlife Federation and its affiliates in 40 States representing from two to three million nature lovers, sportsmen and conservationists.

National Wildlife Week is dedicated to the sensible management and use of wildlife to the mutual benefit of the public, sportsmen and natural resource, both animate and inanimate, of our country.

WINTER WATERFOWL CENSUS TAKEN BY FISH AND WILDLIFE SERVICE: The annual winter inventory of the nation's waterfowl resources was made by the U. S. Fish and Wildlife Service between January 10 and 13 this year.

State and federal agencies over all of North America and part of South America cooperated in the mammoth project.

Primary purpose of the extensive survey was to collect data on trends in waterfowl populations, which, in addition to data recorded from spring and summer field investigations at breeding sites, will provide information essential in the formulation of annual hunting regulations.



Top: First hand information on trout is gained by a trip to the Commission's Fish Hatchery at Marion.

Bottom: A bass chart from *Virginia Wildlife* helps the Bristol scouts in their fish identification.



Troop 16 rakes a fire lane around their fire damage plot on the demonstration area. This plot proves the harm done by fires.



Reforestation plays a big part in Troop 16's conservation program. State forester Olson, the woodlot improver, and his wife, Mrs. Olson, are shown here with the scouts.

(Pictures by Jim Andrews)

HORNADAY AWARD

The Hornaday Award is one of the most coveted awards in the conservation field. It is given to individuals who have made significant contributions to the study and protection of natural resources.

Troop 16 of Bristol is well deserved recipients of this award. Under the leadership of Jim Andrews, institutional representative of the Hornaday Range Program in Conservation, the scouts have undertaken many projects. Some of the highlights include:



Troop 16's activities. Directed by improvement plot gets a new stand

(by Andrews)



Y AWARD

represents Scoutdom's highest award. It is not given carelessly but after hard months of work and

is on its way to winning the capable direction of Andy Peery, native of the troop, a long time education, work, and love the boys. Here, in pictures in their progress.



Top: An old hollow stump can be converted into a winter cafeteria for the birdlife of the area.

Bottom: On stumpless areas a brush shelter can do an efficient job as a feeding station.



Game technician Charles Peery shows the scouts the importance of map making and pacing in locating quail feeding ranges on the area.

SOME OF THE best cooperative wildlife management work in the whole country is being done in the Southeastern States. Perhaps nothing like it is as yet being attempted on as large a scale anywhere else in the United States. The State game departments and the U. S. Forest Service are cooperating in some pioneering enterprises of far-reaching potentialities. The habitat management work under way in these southeastern projects is outstanding. It is attracting nationwide attention. We of the Forest Service are mighty happy to be a part of this fine work.

The National Forests on which these cooperative projects are under way are part of a nation-wide system of public forests which the Forest Service is charged with administering in the best interests of this Nation and its people. These National Forests offer about 15 acres of hunting land for each and every one of the twelve million-odd licensed hunters in the country. They have something like 81,000 miles of fishing stream and 1,650,000 acres of lakes and ponds. The Forest Service wants these lands and these waters to be made the best possible for good hunting and fishing.

The National Forests have several advantages for wildlife. They constitute an area equal to one-tenth of the total land area of the United States that is open and unposted for hunting and fishing. They are public lands under stable administration and management. The multiple-use system by which they are managed looks to the coordinated protection and development of all of their resources; and natural resources, as you know, are interdependent.

The Forest Service's objective in the management of these National Forest lands is to provide permanently the greatest total of public benefits. It hopes to achieve this objective through a sound program of resource management, and through effective cooperation between the Federal Government, the States, and the individual citizens.

In this program, wildlife can have a big part. Eighty-one thousand miles of streams and more than 1½ million acres of ponds and lakes in the National Forest constitute a pretty good natural

*Adapted from an address delivered at meeting of the Southeastern Association of Game and Fish Commissioners, Richmond, Va., October 16, 1950.

fish hatchery. The 180 million acres of National Forest lands are a pretty sizeable outdoor rearing pen for game.

It is the Forest Service policy to seek and maintain strong cooperative relations with other agencies that have responsibilities in the field of wildlife management. The program for National Forest wildlife is, in effect, a three-way cooperative set-up. We look to the Fish and Wildlife Service for the fundamental research necessary to determine the basic principles on which wildlife management plans are to be based, and for technical advice in carrying out such plans and principles. We look to the State fish and game departments to assume leadership for restoration, protection, and utilization of the wildlife resources; for the necessary regulations as to licenses, seasons, and bag limits; and often for additional aid in wildlife surveys and local research projects. The Forest Service itself gives primary attention to the maintenance and improvement of a favorable habitat upon which the wildlife can be produced.

Thus the Forest Service, the Fish and Wildlife Service, and the State fish and game departments all have distinct and important roles to play. Through carefully arranged cooperative procedures their programs can be made complementary to each other, with little or no overlap or duplication, and with a more satisfactory wildlife situation as the net result.

Such cooperation, as I have already said, is resulting in some outstanding work in the Southeastern States. Nearly 40 cooperative wildlife management and demonstration areas are now in operation in the National Forests of this region. Some very gratifying improvements in fish and game conditions have been achieved on a number of these project areas.

The cooperative wildlife management program in the National Forests of Virginia was one of the earliest, and it has been widely publicized. The habitat improvement work and managed hunting and fishing conducted on these project areas have been notably successful.

Some very real benefits are resulting from such cooperative programs. The Forest Service is getting some good wildlife habitat work done in the

FORESTS and WILDLIFE

By LYLE F. WATTS
*Chief, U. S. Forest Service**





Photo from American Museum of Natural History

The National Forests of Virginia provide a home for thousands of the state's big game animals.

National Forests that it would not otherwise be able to do with present funds and manpower. Increased income is coming to the States from the sale of regular State licenses as a result of more hunting and fishing opportunities provided by the National Forests. And the public is getting better hunting and fishing.

The Forest Service is anxious to go much farther in habitat management work, but it is handicapped by lack of regular appropriations for this purpose. However, the financial problem of cooperative wildlife management projects in this region, in some cases, is eased through the special fees collected by the States for hunting or fishing permits on the management areas. Through cooperative agreements, the special receipts collected by the States are shared with the Forest Service and applied to the work on the area. It has been amply demonstrated on these areas that the sportsmen are willing to pay a reasonable charge for their sport when they know that they will get good hunting or fishing in return and that the money is being spent to maintain or improve the opportunities for more good sport.

It is the Forest Service's responsibility to administer the National Forests in the best public interest. They are performing many services important to local and national welfare. In the Southeast, the National Forests last year furnished nearly 450 million board feet of timber. The returns from the sale of that timber amounted to more than 4 mil-

lion dollars, 25 percent of which was turned over to the States for county road and school funds. But that yearly cut of timber also is the basis of many thousand man-days of employment; it is the basis of business and industry that helps to support many communities and contributes to a progressing economy for the region. And with the timber in the National Forests managed for sustained yield, it will always keep on coming—indeed, it will gradually increase.

Last year some 3 million recreationists visited the National Forests of the Southeast. They included tourists and vacationers who brought business to local communities, and local people who found opportunities for outdoor enjoyment in the forests. They included hunters and fishermen—the Southeastern National Forests last year had 4 million man-days of hunting and fishing use.

These National Forests perform other important services. They safeguard the water supplies of many communities. Their watershed protection services help to reduce flood damage and sedimentation. The expenditure of 1½ million dollars for road construction and maintenance, and other expenditures for National Forest improvement in the Southeast meant additional employment and benefit for the region.

The National Forest system is still relatively young, especially in the Southeast. There are immense possibilities for resource development, and

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The Mattaponi

By JOHN H. GWATHMEY



Aerial photo by Kesteloo

The sora marshes of the Mattaponi are justly famous for their shooting.

THE BEAUTY OF THE Mattaponi is outstanding, and its charm is enhanced if the beholder is a hunter or angler. The late General William Mitchell, who came yearly on his yacht, the *Canvasback*, to hunt the famous White Oak Marsh, once was heard to remark: "I have cruised many rivers in the United States, but no freshwater stream surpasses the Mattaponi."

It is always crystal clear. Formed from four little tributaries appropriately named the *Mat*, the *Ta*, the *Po* and the *Ni*, the word for the river was probably derived from the Mattaponi Indians, frequently referred to by Captain John Smith and other early Colonial writers. Remnants of the original tribe still reside on their reservation on the river's south bank.

The watershed is of sandy loam, contributing to the uniform clarity of the stream, which meanders through alternate hills and broad marshes on its way to join the Pamunkey at West Point to form the York. The high bluffs are occupied by stately mansions, many of them dating from the Colonial period, and the marshes still are the haunts of waterfowl. The river has been called Virginia's best fish pond.

Many stirring events occurred along the banks of the Mattaponi during the earliest days of the Jamestown Colony, for the first settlers traded fre-

quently with the Indian tribe which was then an important component of Powhatan's powerful confederation. The crafty Opechancanough, implacable foe of the whites, lived at the river's mouth.

Later, the stream was an important outlet for tobacco, Virginia's principal export. Many public warehouses were along its shores, and the thrifty planters rolled their hogsheads through the roadless uplands to these, from whence they were loaded aboard ships which sailed directly to England. On the return voyage, these ships delivered furniture, fine wines, both masculine and feminine finery, and other items of import to the private wharves of the manor houses.

The river is open to navigation to Aylett, and over its waters have floated vessels of many types, the tiny, seagoing ships of the early colonists, famous yachts, barges, schooners, and passenger and freight boats. The last of these to operate on regular schedule was the *Louise*, a remodeled Mississippi sidewheeler, which plied between Aylett and West Point up to the middle twenties. Most conspicuous, at present, are the swarms of little motor-boats of the hunters and anglers.

The Mattaponi is particularly noted for sora hunting, and the sport of shooting these furtive marsh birds from flat skiffs poled through the reeds at high tide has attracted many notables. Colonel

I. E. Emerson, of Baltimore, international yachting enthusiast, usually remained aboard his handsome craft for a week during the sora season. General Mitchell always came. An annual visitor, after the close of the baseball season, was Tyrus Raymond Cobb, usually the guest of the late Jim Pollard, of Richmond.

The Mattaponi, in direct line of flight of the marsh ducks which pour into Virginia each fall, has been and still is a famous area for waterfowling. Many are the clubs and private blinds to be found all up and down the stream. Many Richmond sportsmen shot the celebrated marsh of the old Sandy Point Club, which included on its roster such names as H. R. Pollard, Jr., James J. Pollard, John Bagby, Billy Adams, Hill Montague, Welby Beverley, Haddon Valentine, Bill Dabney and others.

The White Oak Club's property included one of the finest sora marshes in Virginia. Sandy Point, Brookes, Hockley Neck, and Boatley, the last just across the river from the Custis Fishing and Hunting Club, have been fine for waterfowling down through the years. Many of the guests of the old plantation owners were invited to take advantage of the great waterfowling and the fishing.

Some of the best-known landmarks along the river are *Chelsea*, ancient seat of the Moores, now owned by P. L. Reed, Richmond tobacconist; *Wakema*, the old ferry landing in King William from King and Queen Courthouse, which is just below the Mattaponi Indian Reservation; and *White Oak*, where the Mantua Ferry landed the stage coaches bound for Richmond in early times. Further up, on the King and Queen side, is *Hillsboro*, a house unique in architectural characteristics, which was the Colonial home of Colonel Humphrey Hill.

Descendants are familiar with such ancestral homes along the Mattaponi as *Woodberry*, *Enfield*, *White Hall*, *North Point*, *Canterbury*, *Beadley* and *Rose Spout*, and in the upper end of King William County, *Cownes* and *Burlington*. Most of the places had their own landings. Many cherished their duck and sora marshes. Among family names early associated with the Mattaponi country might be mentioned: Aylett, Braxton, Brown, Claiborne, Custis, Dandridge, Edwards, Fox, Garrett, Gwathmey, Hill, Langhorne, Littlepage, Moore, Neale, Pollard, Quarles, Roane, Robinson, Ruffin, Taylor, Waller and West.

Many sportsmen are of the opinion that the Mattaponi is even more important for its fishing than for its duck hunting. Its sora shooting is unsur-

passed. The river abounds in bass, pike, the various varieties of the sunfish family, and is regarded as perhaps the best fresh-water fishing stream in the state. The river is often teeming with rockfish, and many notable catches have been made at Fox's and in the stretch of water in the vicinity of Aylett. Bass and other fresh-water species find ample food and are abundant on the fringes of the marshes. Shad come into the river in great numbers in the spring and have proved highly profitable to the net fishermen.

Throughout both the upper and lower valley there is excellent hunting for quail, rabbits, squirrels, deer, turkeys, and other upland game. While a great deal of the land has been removed for cultivation, there is excellent quail shooting where the land is being intelligently tilled. Raccoons, opossums, foxes, and other four-legged species thrive in the timberlands. Many of the broad lowgrounds of the upper reaches of the watershed are excellent hunting territory.

The shores of the Mattaponi are now dotted with cottages, mainly erected by city dwellers who seek the quiet and seclusion of an interesting region, and who also appreciate the fishing in the limpid waters of the Mattaponi; its boating, its swimming, and its hunting during the gunning seasons. Many Richmond cottage-owners commute to and from their offices in the city for many months of the year.

While the Mattaponi is not one of Virginia's largest rivers, it is one of the most attractive. Its watershed is comparatively small. While the tides ebb and flow several miles above the highway bridge

Abandoned and ruined boat landings are a reminder of the river's past glories.

Photo by Kesteloo



at Aylett, the river ends at the point where West Point stands. It is unpolluted throughout its entire length, it is always clear, and there is seldom a freshet.

As with so many of Virginia's tidal rivers, high among their values is the hunting and fishing which they afford, and this is true of the Mattaponi. Down through the years these recreations have been enjoyed. To the average man, the first thought which would come into his mind regarding the Mattaponi would be the great flights of waterfowl, the sora in the marshes, and the fishing.

As is the case with many of the other rivers with which Virginia is blest, the vast marshes of the Mattaponi are, in effect, virgin wildernesses in the heart of a populous state.

FOREST AND WILDLIFE

(Continued from page 17)

there is need for far more intensive work than it has as yet been possible to do. Through sound multiple-use management, the forests can be made to yield far more in products and services to the public.

Wildlife benefits from such multiple-use management. Timber cutting creates openings and edge for game. Watershed management and fire control keeps fishing streams in good condition. It has been well demonstrated in the cooperative wildlife management units in the Southeastern States that forest rangers and wildlife managers work well together and that their cooperative efforts result in the improvement not only of wildlife resource values but of total resource values.

The cost of manipulating wildlife habitat is often too great for license revenue to meet alone. Commercial timber sales, however, provide an effective tool for wildlife management. Forest managers can take advantage of opportunities for selling timber *when* and *where* wildlife will benefit. Access roads for timber harvesting also provide access to hunting and fishing. Special provisions for stream-bank and channel protection are included in national forest timber sale agreements. Planting programs take into consideration wildlife food and cover needs as well as timber.

The sustained yield principle applied on the Na-

tional Forests means both stability of the wildlife environment as a whole and desirable variation in the cover. Thus a large amount of wildlife habitat improvement can be done through timber sales, in which the timber management men and wildlife management men team up and work together. The opportunities in this field will be even greater as better markets develop for the small, low-value timber species. And we shall certainly be on sound economic ground if we can accomplish much of the needed wildlife habitat improvement through commercial timber sales that help to meet the growing needs of an expanding economy for essential timber products.

The best type of fishing stream improvement is good watershed management. The streams reflect the condition of the watershed. Some significant research on watershed management is being done at the Coweeta Experimental Forest in North Carolina. Through the work there we are learning much about watersheds and streamflow that is important in the development and maintenance of the fish resource.

Wildlife management work, such as that under way in the Southeast, is helping to bring about a better public appreciation of all natural resource values. The Forest Service and the State Foresters are getting better cooperation in forest fire protection from sportsmen who are becoming more and more aware of the relationship between fire control and good hunting and fishing. Through an active interest in wildlife, many people are gaining a better understanding of the interdependence of all natural resources. They are beginning to see, for example, that fish certainly cannot thrive without good water, and good water generally depends on good timber or other vegetative cover on the watersheds.

Wildlife and soil, water, and forests, indeed cannot be considered apart. They will go up, or they will go down, together. The Forest Service wants to see the wildlife resource go ahead to full development in a sound coordinated program for the full development of all resources. If all work together in well-planned cooperative programs, keeping in mind always the basic objective of full resource development, I know we are going to continue to make progress.



CONSERVATION EDUCATION

(Continued from page 7)

and responsibilities. Let us now review the proper approach or methods by which we can reach our objectives.

There is no universal plan for conservation that will be good anywhere, any time. It is possible, however, to make a few general statements that can be understood by all interested in this subject. Conservation education must begin at home, where you are. It must deal with what you have, not what you would like to have. Different states and provinces have tackled their problems in different ways. There is merit in each. *Basically, conservation should be based on scientific facts and not propaganda. It must be an emotional and "doing" or experience program. It must be aimed at enriching the lives of people, particularly children. It must be simple.*

However, before we make too much ado over the method of conservation education we might first profitably look over our own activities a little closer, see if we're doing a good job of education among ourselves. Those of us in wildlife have not been entirely free of errors. Some mistakes are clearly evident.

I would like to point out simply a few:

1. *Educating the educated.* By this I mean that we have slanted our educational efforts towards those who should already know what it's all about. Examples are legion: publications shrouded in technical language meant only for the scientific student; talks and speeches at too high a level of understanding; pretty pictures that inflate the ego of the producer or game scientist but hardly tell a story; news releases that are largely propaganda, not news; and so on.

I cannot over-emphasize the absolute necessity of gearing our educational activities toward those in greatest need—not the game and fish specialist, not the scientist or college professor. These people are already aware—or should be aware—of the problem. Rather let us get to the boy on the street, the man in the office, the farmer in the field; let us get to the hunter who laments: "... what is the game commission doing with the sportsman's money?"

2. *Failing to be practical.* This point can't be stressed too strongly, either. It is better to have one simple, working project in operation than a half dozen good ideas just talked about. The best conservation project gets down to "grass roots" levels: a school girl sitting down and actually writing an essay on wildlife conservation; a boy building a winter feeding station; a group of high school lads planting young pines; a 4-H Club lad cultivating a lespedeza patch for quail. There is a vast difference between studying about something

in a textbook and actually going out in the field, seeing or experiencing the thing first hand.

The bedrock of all education is the rich, full-bodied experience that is seen, handled, tasted, felt, touched, smelled. It is the unabridged version of life itself—tangible experience, commonly referred to as "something we can get our teeth into," or something we can lay our hands on.

We might well think seriously about this purposeful direct experience and its role in conservation learning. During childhood our sharpest, richest memories are evoked by direct experiences—the first bluebird in spring, the gathering of ripe wild strawberries in the field, the sight of the first rattlesnake, the drama of a rampaging river, the whistling of the Bobwhite. If we want our youngsters to think and act as conservationists, then let's be practical and create lasting impressions for them. Let them see ugly erosion at work, let them smell poisoned and polluted streams; let them also study the nitrogen cycle in the garden, the food chain in the pond; let them see the cure; *let them experience for themselves.*

3. *Over-selling one idea.* This mistake has become altogether too evident. We have over-sold the idea of refuges, game farms, fire, and many other tools of management until it has come back to us like a boomerang. The difficulties beset by the "buck law" continue to creep up on us in many regions. This is the best example of the over-selling of one idea I know of.

4. *Failure to recognize "multiple-use" values.* I think this has been a mistake or oversight rather generally evidenced. In our zealousness to push wildlife conservation, we have frequently lost sight of the multiple values of wildlife. In our frantic efforts to appease the sporting public we have often lost sight of the intangibles: the esthetic value of birds and other animal life, the recreating influence of woods, lakes, streams, fields, and wilderness areas. The value of game animals as objects of photography, natural history study, have hardly been appreciated. The biological values of our wildlife have frequently been overlooked. And let us not forget the economic values—the value in food, animal by-products, weed and insect control, and the like.

If we believe in good land use, then it is imperative that we recognize that soil, waters, fauna, flora, and people make up the community. The wildlife educator must realize that there is no such thing as wildlife conservation by itself. *One-idea conservation is as outmoded as one-class legislation.* The construction of huge dams across major rivers far downstream to conserve water, without protection of the watersheds upstream, results in destroying values of the river, both above and below the dam. The classic Muskingum Conservancy District in Ohio is a working model of land use as it

should be, based on the development of all basic assets of all peoples in one watershed. Wise conservation requires an accurate knowledge of all resources and their uses.

5. *Lack of collective action.* This is especially true where conservation education is in its beginning stages. Sooner or later all conservationists realize that there is danger in one-sided thinking and action. It is foolish for the wildlifer not to think in terms of collective action. Yet there is evidence aplenty to show that we have had much of this: water use only for fishing, timber management only for game, wildlife values only in terms of sport. Wildlifers must come around to recognizing multi-purpose management, and should abandon the one-sided idea that animals have only sport value.

If the prime purpose of resource use education is to create attitudes, background and knowledge which will result in action on the part of all citizens, we must have close collaboration between all agencies and groups on conservation practices and policies. Such collaboration will result in pooling experiences and talents, elimination of duplication, and in the development of common goals.

It is good to know that such collective group action is already at work in some states. North Carolina has its Resource-Use Commission, Tennessee its agreement between the Conservation Department and the State Board of Education, California its new Conservation Education Committee, Michigan and Ohio their close tie-up with the Department of Education. Wildlife educators would do well to take the initiative for this very much needed collective effort where it fails to exist.

The "Nature Knights" in Missouri, the "Junior Foresters" in Omaha, and the "Junior Conservation Clubs" in Kentucky are examples of working organizations developed when educators, laymen, and conservationists pool their efforts. Members of these organizations become leaders in school conservation activities and have a direct influence on educators.

The two greatest needs that confront us today in conservation education are (1) getting resource-use in the curricula of our elementary and secondary schools, and (2) lack of teachers and other leaders who are trained and equipped with adequate knowledge to teach the nation's dependence upon natural resources and the best methods of perpetually utilizing those resources.

I cannot go into this problem except very lightly, and simply point out that we must forcefully indicate to teachers and administrators the absolute need of making conservation education a vital part in the curriculum of every school in the nation.

In this connection, some believe that conservation should be a separately taught subject. Others feel that conservation should be integrated with the entire school program so as to become signifi-

cant to the pupils and result in proper perspective. Some states have passed laws requiring the teaching of conservation of natural resources in their public school systems. Wisconsin, Florida, and Oklahoma have such laws. I myself don't feel qualified to say which is the best method. The important thing is to get conservation taught, no matter what the means.

The problem of getting trained teachers is a big one. Present facilities for teacher training in resource-use are inadequate. Our teachers have not been given the full opportunity to prepare themselves sufficiently for the important job of teaching the facts about conservation. Lacking training and the inspiration, it is wishful thinking that teachers will *want* to teach conservation.

Therefore, we must have an effective program of teacher training. This should be a pre-service training in all normal schools and teacher training schools, as well as in-service training in all fields and at all levels.

Pre-service training for teachers should begin during the early, impressionable years, preferably during the elementary and secondary school periods. During college years prospective teachers should be given an opportunity to broaden their knowledge in conservation by taking appropriate subjects. Unless this specialized instruction is made available to them and unless a measure of course work in resource use becomes required, we can expect very few teachers to be competent to teach conservation. *The backbone of our educational system is the classroom teacher and unless he or she is properly indoctrinated in the philosophies and practices underlying resource use, I am afraid we shall continue the hard struggle uphill.*

In-service teacher training is another of our immediate needs. To the practicing teacher this does not mean that additional course work is necessary, but rather that present knowledge be re-shuffled and that life itself be viewed from a different perspective—an angle that is sure to cut across subject matter boundaries and bring him or her closer to the realities of life.

Probably one of the best methods yet devised toward bringing about in-service teacher training is the workshop. It is through this medium that teachers can learn conservation experiences first hand, and receive concentrated doses of resource use training in one lump. Many states have started these workshops for teachers and it is gratifying to see others following suit. Laymen and school administrators can also be trained in workshops. Records reveal that where such leaders have been given workshop training and have carried their teaching to their pupils, there was remarkable evidence of the grasp of fundamentals on the part of the students.

How to get such a program across again is some-

thing that must stagger the imagination. We must somehow show the top educators and administrators the absolute need for action and then help them in every way possible to get something done.

One big untapped reservoir of conservation teachers is the hundreds of trained wildlife men who are now seeking jobs—positions they can't find. Some forty state colleges and universities are now offering courses in wildlife management, not to mention existing research units and new ones constantly being created. Why wouldn't it be a good idea to absorb at least some of these qualified graduates into the hard-pressed teaching profession? Jobs in the strictly wildlife field are getting scarce, and we should not overlook the possibility of utilizing this great training force for our own good, rather than drive it into foreign occupations.

Finally, I wish to stress the importance of the wildlifer working with the educator. After all, it is really the educator's job to teach our youth how to become better citizens. And this prerogative will be guarded and guarded zealously. We must not make the mistake of telling them how to teach, or even what to teach, but we can assist them in their teaching. When this assistance is given freely and given wholeheartedly, most educators will seldom be found wanting in cooperation—they'll fall quickly in line when shown an intelligent approach.

What the future holds for conservation education, we can't definitely say. So much depends on what happens in our troubled world. There is reason for optimism however. In the short period of the last half century we have made notable strides in conservation. There has been a growing concern for our renewable resources in many ways, and by a wide range of agencies. The press alone has given more editorial space and attention to conservation news during the past year than it presumably did in the preceding decade. State and federal agencies are increasing their budgets and personnel in this direction. We are beginning to take care of our forests; our waters are getting cleaner, at least in some states; industry is slowly awakening to the needs of conservation. Some good legislation is being passed. Some schools and colleges are making notable strides. (Michigan has changed its school from Forestry and Conservation to a School of Natural Resources, the first in the nation. Yale and Cornell are offering graduate studies in conservation.) Yet there is a big, tre-

mendous job to be done.

This brings me to the end of my paper. I should like to dispense with a summary, if I may, and close with a few personal thoughts.

This is a very momentous year—a year of inquiry. The halfway mark of a great century is passing. We live amid fear, anxiety, restlessness. Certainly all is not well with the world. There is a war and there is talk of more war. This cannot continue indefinitely. Somehow, somewhere, a method must be found to hold the world together in peace. It does not seem inherent, to me, that man should want to destroy himself.

Men have lost much faith in themselves. Is this not what is wrong with the world today? The good earth is all right. It is man who is in trouble. Three times within this brief half-century we have taken to the sword to solve our troubles. Have they been solved? We've sacrificed much—the lives of gallant men, property, and natural wealth. We have gouged our mines, slashed our forests, impoverished our land, disturbed our environment, to bring precious victory to the democratic world. But does not the victory look empty?

What incentive have we, *those of us who are engaged in conservation work, to help build a better world when others seek to destroy it?* These are portentous questions all of us might well ponder. Was not man made for a higher destiny than organized murder, for something higher than the frantic struggle to acquire things only material? It occurs to me that a little shot of humility wouldn't hurt the average American, painful though it might be to take. It further seems to me that if all of us who are engaged in the noble work of conservation would strive to do a little better job of what we are doing; *if we would never lose sight of the great "Code of Living" set down for us centuries ago by a Great Man; if we never lose faith in ourselves, in our cause, and our people, I feel sure that our world would remain secure.* Those of us in wildlife circles have it within our grasp to mold a greater destiny. Important natural resources—the very bedrock of our American freedom—are entrusted to our care. The lives and thinking of millions of people, and generations yet unborn, can be shaped into a powerful conservation crusade. The dignity of man can yet be restored, our earthen damages repaired. *There lies our hope, and therein, I believe, lies our very greatest future.* Are we going to accept the challenge that confronts us?

Field Force Notes



Operation Bird Feed Conducted In Frederick County

The Feed merchants of Winchester, the Winchester Civil Air Patrol, and local sportsmen, cooperated during the heavy snow week of December 11 to see



Photo from Valley Photo Center

Conservation Officer T. J. Starrett and children, Jane and Bobby Starrett, George Rodgers, Raymond Carter, Benton Snider and George Scheder, of the Winchester area, are pictured above at the start of the bird feeding operation.

that the wildlife of the county was cared for.

One thousand pounds of feed, donated by the merchants, was scattered by C.A.P. plane over and around Winchester and the county in general.

Conservation Officer T. J. Starrett and Game Warden Earl Cather of Frederick County actively assisted in the operation.

Fishing Fair Dates Set for July 27-29

The Sixteenth Annual Chesapeake Bay Fishing Fair Grand Contest will be held in Annapolis, Maryland, July 27, 28, and 29, 1951, according to Harry T. Krause, Annapolis, first vice-president of the organization.

The Fishing Fair, well-known to the followers of Izaak Walton, has often been described as a county fair on water, because of the Mardi Gras, or holiday atmosphere, the colorful water parade of decorated boats, and the hordes of anglers from many states who annually attend the event.

Fifty-four sterling silver trophies will be offered for the big fish classifications, for the angler coming

the longest distance as well as for the oldest and the youngest angler, and many other classifications. Attendance at the Fishing Fairs ranges from three to eleven thousand people.

Rosebery Awarded Research Prize

Cecil F. DeLaBarre, secretary of the Virginia Division of the Izaak Walton League, has announced that Dean A. Rosebery, assistant chief of the Fish Division of the Commission of Game and Inland Fisheries, and former doctorate student at V.P.I., has been named "most valuable research scientist in fisheries and wildlife during the year 1949-1950."

Rosebery received his doctorate degree from V.P.I. for outstanding fisheries investigation work at Claytor Lake, in Pinalski County on New River.

The IWLA secretary reported that Dr. Rosebery will be presented a \$100 research prize at the next meeting of the board of directors of the Virginia Division. Dr. G. A. Swanson, Dean of the School of Conservation at Cornell University, and his associates were the judges in the naming of this award.

Rosebery joined the Fish Division as research fish scientist in January, 1950, and is looked upon by ichthyologists and fisheries workers as "one of the most outstanding young fisheries scientists in the field."

Two Face Doe Killing Charge in Augusta County

A doe already skinned, butchered, and packed away in an automobile wound up the hunting for two non-resident hunters at the Augusta County sheriff's office during the 1950 season.

State police, cooperating with Angsta game wardens, discovered the doe while checking hunters' cars in Chmehville. Game Warden H. L. Todd was notified and filed the following charges:

Against Samuel Oscar Eckard, Colmar Manor, Md., killing doe out of season and having illegal deer meat in his possession.

Against John Edward Rzeszut, Arlington, transporting illegal deer meat. It was in his car that his hunting companion stored the venison.

The two men were on their way back to their homes when apprehended, police said. Both were released under bond—\$650 for Eckard and \$250 for Rzeszut—for appearance later in Trial Justice Court.



REPORT ON THE FIFTIETH ANNIVERSARY MEETING OF THE SOCIETY OF AMERICAN FORESTERS

More than one thousand strong, American foresters descended upon Washington's elite Mayflower Hotel in December (13 to 16) to celebrate the Golden Anniversary of the Society of American Foresters and mark the inspiring and meteoric growth of forestry in the past half century.

It was an auspicious meeting. No greater galaxy of conservationists—devoted almost fanatically to the cause of forest conservation—has been assembled under one roof in this country. Almost every senior dean of forestry, whether educator, technologist, administrator, or research scientist was seen or heard from during the four-day conference, studded by two heavy general session programs and ten divisional meetings.

Themes of the general sessions were "The Society Takes Stock" and "The Society Looks Ahead." Division meetings were offered in education, forest economics, forest products, forest recreation, forest-wildlife management, private forestry, public relations, range management, silviculture, and watershed management.

Some of the top foresters heard from were: Charles F. Evans, President of the Society; Henry Clepper, Executive Secretary of the Society; Lyle F. Watts, Chief of the U. S. Forest Service; Dean Samuel T. Dana, School of Natural Resources, University of Michigan; Raphael Zou, St. Paul, Minnesota; Tom Wallace, of the *Louisville Times*, and dozens of others.

The division session on Public Relations was extremely well attended, and important panel discussions were had on motion pictures and how to put them together, visual aids, present relations, radio interviewing, and the planning of a human relations program.

The difficulty experienced by most foresters attending the conference was that there were so many wonderful panels going on at the same time, it was virtually impossible to cover any but a small fraction of the better papers and discussions.

Probably the one most significant thing that impressed outsiders was the remarkable spirit of cohesion exhibited by the foresters, even though many are engaged in a dozen or more side-line forestry professions. Interest ran high at every meeting, and lively discussions ensued at every one of the panel meetings. These foresters have got to be given credit for their remarkable drive and energy, and almost fanatic devotion to a growingly important profession.

Thursday evening, December 14, was occupied largely by get-togethers of different alumni groups. The Michigan alumni reunion alone had close to 100 present.

Friday evening was taken up by a banquet and dance, with Mr. Richard E. McArdle, of the U. S. Forest Service, as toastmaster. Featured on the banquet program was the presentation of commemorative plaques to William L. Hall, Ralph S. Hosmer, and Henry S. Graves, charter members of the Society, and the award of the Pinchot Medal and the Sir William Schlich Memorial Medal. A pageant of

major events in American forestry and an illustrated talk by Tom Gill, emphasizing the leadership by early foresters in this country, were also included in the program.

The dance that followed was a gala affair, although as usual among foresters, there appeared to be a shortage of ladies.

FORMER WINDSOR SHADES GAME FARM TO BE TREE NURSERY

An agreement has been made between the Commission of Game and Inland Fisheries and the Commission of Conservation and Development allowing the latter to use the former game farm property at Windsor Shades in New Kent County as a tree nursery.

The property has had only limited use as a game farm during the past five years, because the construction of Walker's Dam in the vicinity impounded such a large body of water that local humidity was increased to a point where the young game birds did not do well. During the past year, operations at the farm ceased entirely, and all stock and facilities were transferred to the game farm in Cumberland County.

The new tree nursery on the area is expected to be mostly devoted to the raising of pine, with some small plantings of other species being made. The property contains sufficient area to run the state's tree nursery production up to twenty million per year.

Complete transfer of the property between the two state agencies will be a matter for the next meeting of the General Assembly.



for
Students

Teachers

Parents

BIRD OF THE MONTH

The Bald Eagle

All over the entire United States, north into Alaska and Canada, and south to central Mexico can be found the nests or haunts of the magnificent bald eagle—the emblem of our country.

No one who has ever seen one can forget his first sight of an eagle. The majestic spread of wings as the great bird soars against the sky, or the somber brooding appearance it presents as it sits upright on some dead stub, remain in the memory.

Although protected by federal law since 1940, bald eagles are still comparatively rare birds throughout the country, and all possible protection should be given to the nests and to the birds themselves.

The bald eagle is primarily a fish eater, and because of this fact he is seldom ever found too far from water. Rocky headlands along both the Atlantic and Pacific coasts are familiar places to him, as are most of the principal rivers, lakes, and streams of the country. Most of the fish that he lives on are either dead or dying specimens, or slow-moving, sluggish rough fish such as carp and suckers—fish that are comparatively easy for the large clumsy eagle to catch.

Some of the bad reputation that the bald eagle has gained in some sections of the country actually belongs to a relative, the golden eagle, whose range is commonly the western part of the country. The golden eagle is not averse to a dinner of young lamb occasionally, and western stockmen do not appreciate its attacks on their flocks at all.

Unfortunately for the bald eagle the stockmen often fail to differentiate between him and the golden, so many bald eagles are killed each year because of the bad habits of the other species.

Adult bald eagles are easily told from the golden because of their white heads

and tails, but young or *immature* bald eagles are all brown until they are about three years old, and resemble the golden very closely in this stage.

The nest of the bald eagle is added to, and is used, year after year so that eventually it becomes an extremely large and impressive structure. One large



nest in a tree in Ohio was recorded as being over eight feet across the top and twelve feet deep! It contained over two tons of sticks!

For such a large bird, the eggs are surprisingly small — less than three inches long. The usual number is two, but occasionally three or four may be produced.

When the eggs hatch, the wooly youngsters are entirely dependent on the parents for food until they are finally old enough to leave the nest and fend for themselves.

WARDEN BILL'S PATROL

I'm always glad to hear from friends of mine all over the state, and particularly from you boys and girls who love the out-of-doors. I have a little story here

that was sent in by Ginger Neal of the Bainbridge Jr. High School, and I know you will like it. It's about a snake, and apparently Ginger has discovered that snakes are pretty interesting animals.

I'd certainly like to have more stories from all of you boys and girls. Just send them in to me in care of *Virginia Wildlife* and I'll see that they get into the magazine.

Here's the story.

Nathaniel the Snake

Nathaniel, as I call him, mainly because the name Nathaniel is long and so is our snake, came to live with us a few weeks ago. And though he has been handled with inexperienced hands, dropped on the floor not a few times, not to mention having a few fights with a disagreeable lizard, he is amazingly alive.

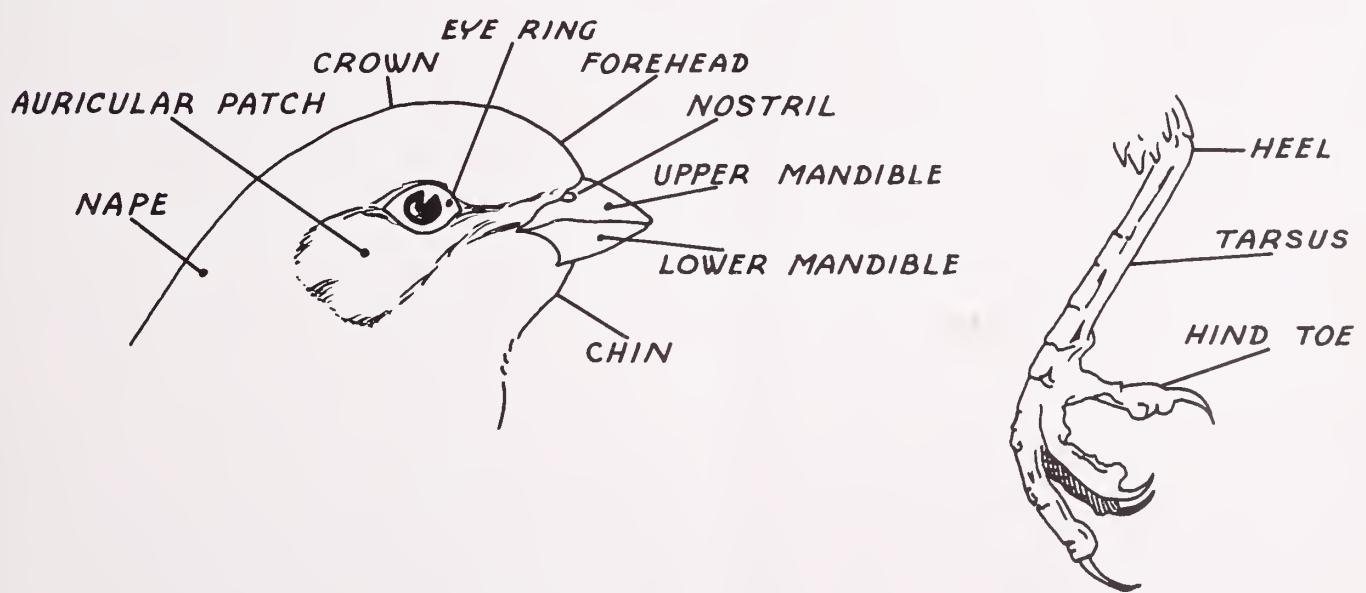
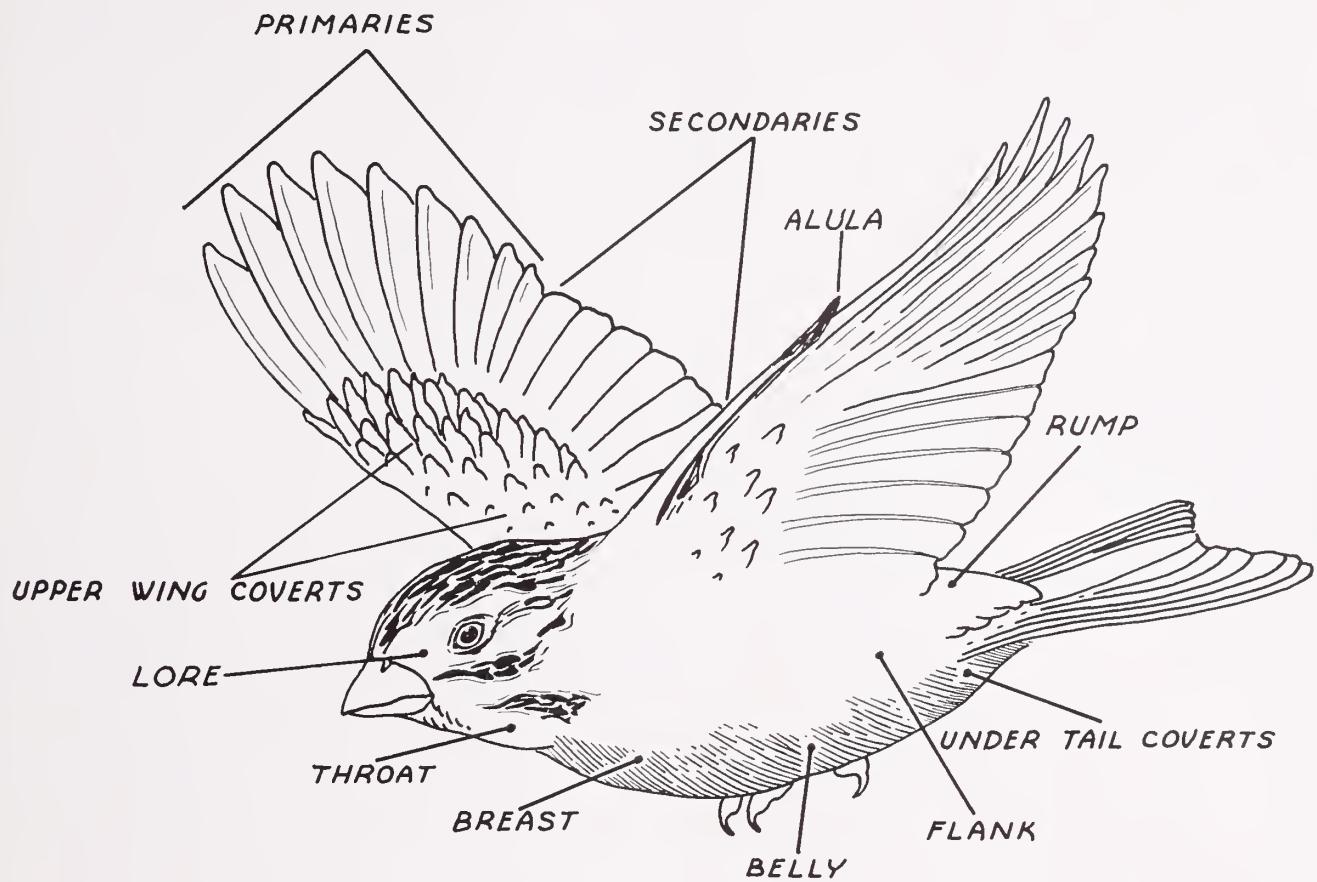
Our friend Nathaniel came from a very large family of Eastern Garter snakes. He wears a striped sport suit with green and yellow jacket and trousers. To complete his snappy outfit, there is a light yellow sport shirt. The little girl snakes must think him a very cute fellow.

Now to his glamorous face. Nature has blessed him with dark handsome eyes and a long Grecian nose. He has very thin lips. And, as for me, I am glad there are no snake dentists. For I am sure our very fashionable friend would have teeth. But, as it is, he only has small ridges, which are harmless to us.

He lives in the most fashionable district in our aquarium, along with that disagreeable lizard. He is served the best dishes ever given to snakes. His menu consists of a rare fly steak and a bug stew.

When Nathaniel dies and, incidentally that will be a very short time unless he has a very strong constitution, with our handling and that lizard, he will be buried with the proper respect for one so popular.

PARTS OF A BIRD



111

LAST CALL!!

THE

FOURTH ANNUAL

\$1000.00

WILDLIFE ESSAY CONTEST

ends February 28, 1951

57 Prizes!

RS!

it *ALL* essays from your school as a unit.

2. Keep *ALL* essays together by grades.
3. Enter *ALL* essays written. They will count towards the school prize.

STUDENTS!

Don't forget! The eight grand prize winners (one for each grade) come to Richmond as guests of the Game Commission to receive their awards. You could be one of them!

Winners will be announced as soon as the final judging is completed.